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STRATEGY RESEARCH PROJECT

COLD WAR ARMS CONTROL MOTIVATIONS AND TECHNIQUES - A GUIDE FOR THE FUTURE?

BY

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ABSTRACT

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Possession of Nuclear weapons contributed to the United States' and the Soviet Union's achievement of "Superpower" status in the post-World War II world. Just as confrontation between the United States and the Soviet Union dominated the military and political scene during this period; their attempts to place controls on nuclear weapons dominated the arms control world. The Superpowers were motivated by a variety of forces to enter into arms control negotiations and over time found several negotiation techniques to be worthwhile. This paper provides a brief historical account of some of the major arms control agreements between the US and the Soviet Union, examines their motivations to enter into negotiations and illustrates some successful negotiation techniques. The author hypothesizes on the utility of this Cold War arms control experience as a useful guide for arms control in a single superpower world.

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TABLE OF CONTENTS

INTRODUCTION.....	1
POST COLD WAR ARMS CONTROL.....	2
MOTIVATING FORCES OF SUPERPOWER ARMS CONTROL.....	13
THE CONTEMPORARY ARMS CONTROL SCENE.....	18
CONCLUSION.....	22
END NOTES.....	23
SELECTED BIBLIOGRAPHY.....	25

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Cold War Arms Control Motivations and Techniques -- A Guide for the Future?

The relationship between the United States and the Soviet Union dominated the Post-World War II political and military scene. The United States immediately assumed superpower status after the war by virtue of its massive undamaged industrial base, its natural resource and economic wealth and perhaps most importantly in the eyes of the rest of the world, its sole possession of nuclear weaponry. The Soviet Union, ravaged by the war, dominated the Eurasian land mass by the sheer weight of its conventional military forces and the aggressive nature of its foreign policy. Although these two countries had just fought as allies to defeat Nazi Germany, the stark differences between their political, economic and social systems quickly set them at odds. With its acquisition of nuclear weapons in 1949 the Soviet Union became the second superpower on the world stage and the potential for catastrophic collision between these giants took on an even greater significance.

Other countries eventually acquired nuclear weapons; but the Cold War nuclear confrontation between the two superpowers was predominate from 1950 to 1991. Over time, the United States and the Soviet Union took steps to slow, stop and eventually, reverse the previously unchecked growth of nuclear weapons. Just as the Cold War was centered on US - USSR confrontation, these arms control efforts were also dominated by the moves and countermoves of the superpowers. Of the thirteen nuclear arms control treaties recorded between 1950 and 1989 nine were bilateral agreements between the United States and the Soviet Union.¹

The collapse of the Soviet Union in 1991 caused a tremendous shift in the world power equation. While Russia, the principal inheritor of Soviet military strength, maintains a considerable nuclear arsenal, the country has been torn by internal political and economic troubles which have caused it to turn its attentions inward for the last few years. It is generally accepted that, due to this situation, Russia does not enjoy the superpower status held by the Soviet Union.²

The central question of this paper concerns the forces that drove the superpower arms control relationship of the 1960's, 70's and 80's and their applicability to future arms control processes in a single superpower world. Can an understanding of the political, economic and national security influences that motivated the United States and the Soviet Union/Russia to achieve arms control successes during the post World War II period serve to guide US efforts to broker successful arms control agreements in the future? To determine the answer to this question I will briefly discuss the history of US - Soviet arms control addressing specific agreements and pointing out the fundamental motivations of the parties. Subsequently I will describe some contemporary arms control concerns and present ideas on how the United States might employ lessons learned from our cold war experiences to address these situations.

Post Cold War Arms Control

The impetus for the modern era of US arms control policy dates to 1950, with the publication of NSC-68 which stated that "it would be to the long term advantage of the United States if atomic weapons were to be effectively eliminated from national peacetime armaments."³ This philosophical goal was overshadowed however by the reality of the

Soviet's acquisition of nuclear weapons in 1949 and the continued presence of large Soviet conventional formations in Europe. NSC-68 planted the seed of future arms control but its real impact was to start a massive build up of nuclear forces that would continue unabated until 1972.

The US nuclear build up was initially driven by two concerns. First was the Soviet threat.⁴ Our rapid military draw down following World War II left only token forces to occupy and assist in the reconstruction of Europe. Soviet rhetoric supported by large occupation armies placed ever increasing importance on the availability of US nuclear forces to defend our European friends and allies. The buildup was also driven by fiscal concerns. President Eisenhower was determined to reduce defense spending as part of the long term budget process. His "New Look" program was designed to meet the Soviet threat without seriously weakening the US economy by placing less reliance on conventional forces and more on nuclear arms.⁵ The resultant US buildup of nuclear weapons resulted in a predictable Soviet response. The race was on!

Between 1950 and 1960 the US inventory of nuclear weapons grew from less than 300 to over 18,000 and the number of delivery aircraft went up from 520 propeller driven W.W.II vintage planes to over 1700 jet-powered bombers.⁶ The next ten years saw the introduction of Intercontinental Ballistic Missiles (ICBM), Intermediate Range Ballistic Missiles (IRBM) and the advent of Submarine Launched Ballistic Missiles (SLBM). These developments represented a generational change in the nuclear arms race as unmanned systems became the predominate means of delivery. Although the Soviets began this race at a disadvantage, they dedicated incredible resources to closing the

bomber then missile gaps. Given additional impetus by the 1961 Cuban missile crisis the Soviets redoubled their efforts to catch the US in missile strength; a goal which they achieved only after the unilateral US halt in missile production in 1967.⁷

The preceding historical account has set the stage for the discussion of US-Soviet arms control. What caused these countries to halt, then reverse the massive weapons build up of the 1950's and 1960's? How much did economics have to do with arms control policy? What was the role of disparate technological development? To answer these questions I will examine the Limited Test Ban Treaty (LTBT), Strategic Arms Limitation Talks (SALT), the Anti-Ballistic Missile (ABM) Treaty, and the Intermediate Nuclear Forces (INF) Treaty in terms of US and Soviet motivation to enter into these agreements.

The Limited Test Ban Treaty

The LTBT signed in 1963 represents the first significant arms control agreement between the United States and the Soviet Union.⁸ The treaty prohibited the testing of nuclear weapons in the atmosphere or in space, limiting the signatories to underground test explosions. When the Soviets initiated the test ban discussion in 1956 they cited several rationales for halting tests:

The need for such an agreement is dictated not only by the fact that continued tests of atomic and hydrogen bombs pose a great danger for human health and that such tests permit the production of still more threatening and destructive types of atomic and hydrogen bombs, but also by the fact that positive resolution of this question would greatly increase the possibility of achieving agreement on other questions of disarmament and stopping the continuation of the arms race.⁹

Testing is a vital component of modernizing any type of weapon. Despite the human health rhetoric, early negotiations on the test ban treaty were driven by US and Soviet desires to gain advantage over one another by halting their rival's development of new, more capable weapons.¹⁰ Non-proliferation was also no doubt a motivator for both countries. While Great Britain had fielded nuclear weapons in 1952 a comprehensive test ban could have crippled developmental efforts by France and China. The principal motivation for the Soviets however, was political. After the death of Stalin in 1953 the new leadership saw the need to ease tensions with the United States.¹¹ This need was amplified after the 1962 Cuban missile crisis pushed the superpowers to the brink of nuclear war.¹²

In the final analysis, the LTBT did virtually nothing to slow United States or Soviet modernization efforts since it did not completely ban weapon testing. It had some value in the non-proliferation area and certainly contributed to reduce the health hazards associated with above-ground testing. Its enduring contribution was to open the door to further arms control discussions.

Strategic Arms Limitation Talks

The growth of superpower nuclear arsenals went virtually unchecked from 1949 through 1972. During this period the only rule of the game appeared to be "to build as many weapons as possible as quickly as possible."¹³ The SALT I discussions initiated in late 1969 produced two documents: the Interim Agreement on Offensive Weapons (known as the SALT I agreement) and the ABM Treaty. These agreements represented a significant departure from previous Soviet reasoning which had focused on the concept of

winning the “inevitable” nuclear war with the United States. Consistent with this old reasoning, maintaining parity with the US in offensive systems as well as the development of systems to protect against hostile ballistic missiles were the only ways to ensure the security of the Soviet state. This logic made arms control mechanisms unnecessary.¹⁴ Furthermore, the Soviet leadership was unanimous in its view that US arms control initiatives were merely an attempt to gain “unilateral advantage over the USSR.”¹⁵ In light of these observations I will discuss those factors that motivated changes in Soviet policy and influenced US decisionmakers.

SALT I Agreement

SALT I established a freeze on offensive ballistic missile systems (ICBMs and SLBMs) for a period of five years.¹⁶ Several fundamental changes in policy allowed the Soviets to enter into this agreement.:.

- * realization that “winning” a nuclear war was not a viable concept
- * a desire to end the uncertainty in the accelerating arms race
- * recognition of the economic burden of a continuing arms build-up
- * a desire to retain some advantage over the US while “perfecting” the strategic balance¹⁷

The underlying policy for the Soviets as they entered into the discussions was the idea of “equal security.” This concept drew from the reasoning that equal numbers of weapons were not a true measure of capability. The Soviets believed that they needed superiority in total ballistic weapons to compensate for the capabilities of US forward based systems on their borders. They were also concerned about the presence of British and French nuclear weapons and wanted them considered in any agreement.¹⁸

US concerns revolved around the ever-increasing size of the Soviet nuclear arsenal. While the US had unilaterally ceased to produce strategic nuclear weapons in 1967 there was no sign of a slow-down on the Soviet side. The Soviets might have stopped their production once it became obvious that we had; but there was no way to ensure this short of a negotiated halt.¹⁹

The final SALT I agreement reflected the critical role of compromise in the negotiation process. In the end, both sides hailed the agreement as historic even though neither side got everything that it had wanted. SALT I didn't restrict US forward based systems nor did it include British or French nuclear weapons as the Soviets had initially demanded. The US got its freeze on offensive ballistic missiles but at numbers more in line with the Soviet's equal security philosophy than the US equal numbers position. The actual freeze allowed the Soviets a 40% advantage in ICBMs and a 10% advantage in SLBMs. The US side rationalized this asymmetry by emphasizing the two-to-one US advantage in warheads resulting from the fact that most US missiles had a multiple warhead capability.²⁰

It's important to note that like the LTBT, SALT I had no effect on weapons modernization. In fact, while the US had multiple independently-targetable reentry vehicle (MIRV) warheads on three separate missile systems prior to the start of SALT I negotiations, the Soviets did not field this technology until after the agreement was signed.²¹

SALT I provided a forum for the discussion of a variety of US and Soviet national security, economic and political concerns. The negotiation process also provided a view

of how such concerns must be weighed against available weapons technology as well as weapons count. Most importantly, SALT I continued the arms control dialogue despite the near total enmity and distrust that typified US-Soviet relations in the early 1970s.

Anti-Ballistic Missile Treaty

The ABM Treaty limited each of the signatory nations to two ballistic missile defensive complexes: one to protect the nation's capital and another to guard an existing ICBM field. It also imposed restrictions on early warning radars associated with ABM defenses and forbade space-based ABM systems.²² The ABM Treaty is important to this discussion because it demonstrates how new thinking can overcome an intransigent negotiating opponent and how an agreement can be developed to compensate for a wide range of national concerns.

Soviet efforts to develop ABM systems were the product of deep feelings resulting from the countries W.W.II experiences. Defense of the homeland was considered “an objective national security requirement.²³ The US argued that ABM systems were inherently destabilizing because they threatened that an enemy might launch a massive first strike with the hope that its defenses could minimize the effects of any retaliatory attack. To counter this possibility, the targeted nation would be forced to build more ICBMs to ensure an adequate response thus further accelerating the arms race.²⁴ This unorthodox reasoning on the issue of strategic defense systems initially caught the Soviet negotiators off guard and was rejected out of hand. After careful analysis however, the US position was found to have some merit. This realization combined with inadequate technological

progress on ABM weapons then in development drove the Soviets to serious discussions on the limitation of ABM systems.²⁵

During these discussions the Soviets actually tailored the resulting treaty to meet a variety of specific concerns. While Soviet experts saw great difficulties in designing effective ABM systems, especially in view of the growing MIRV threat, they acknowledged that the US might make a technological breakthrough that would give it an advantage. The limitation on numbers and locations of permitted ABM sites were designed to reduce any advantage that the US might acquire. The Soviets rejected a total ban on ABM sites because they already had a significant investment in their system defending Moscow.²⁶

The key factor driving the Soviet decision to diverge from their long-term emphasis on defense and accept limitations on ABM was economic. They could not afford to become involved in a drawn out technological competition with the US in as attempt to field an acceptable ABM system nor could the existing ICBM buildup continue. The limited ban provided the cheapest way out of this dilemma.²⁷

Intermediate Nuclear Forces Treaty

The INF Treaty signed in 1987 required the elimination of an entire class of missiles;²⁸ the first negotiated destruction of delivery systems in almost 40 years of US - Soviet arms control dialogue. This agreement highlighted the role that alliance politics could play in shaping US arms control policy.

Although the Soviets had relented on their demand to limit US forward based systems during the SALT I talks, they had not changed their opinion on the threat that

these systems posed. Their concern was reflected in the effort that they placed on the development of a new generation, solid fueled, multiple warhead, IRBM known as the SS-20 to counter the US presence. This missile, based both in the Soviet Far East and in the western Soviet Union, could range all of the NATO countries except the United States and Canada. Its fielding in the mid -1970s, combined with the fielding of the Backfire bomber represented a significant modernization of the Soviet theater nuclear force and resulted in a US reassessment of the balance of nuclear power in Europe.²⁹

In response to this new threat the US and its NATO partners adopted the “dual track” strategy. The first track of this plan involved the fielding of US Pershing II and ground launched cruise missiles (GLCM) in five countries of Western Europe beginning in 1983. The Pershing II in particular, posed a considerable threat to the Soviet Union. It was a fast, accurate missile based on the immediate periphery of the USSR. Its 7-15 minute flight time made it a possible first strike weapon which provided significantly less warning time than the US ICBM systems.³⁰

The second track involved negotiations with the Soviets to set limits on total numbers of INF systems to be allowed in Europe. In 1981 President Reagan proposed the so-called zero option. This proposal was reminiscent of an earlier trade off of IRBM systems resulting from the Cuban Missile crisis. In 1962 the US withdrew Thor and Jupiter missiles from sites in Europe in tacit exchange for the withdrawal of Soviet missiles from Cuba.³¹ The critical difference between the Kennedy-Khrushchev agreement and Reagan’s proposal was that the new zero option asked the Soviets to destroy their fielded missile SS-20, SS-4 and SS-5 systems in trade for only a US promise not to deploy a

proposed package of IRBMs. The Soviets rejected the US offer not only due to its obvious asymmetry but because in accordance with their “equal security” philosophy discussed previously, the Soviet missiles only compensated for the presence of US European-based nuclear strike aircraft. In Soviet eyes, an equitable trade would allow the deployed SS-20s to stay without the fielding of a comparable US system.³²

The Soviets also believed that they had an ally on this issue in European public opinion. There were huge public demonstrations all over Europe to protest announced plans to field US missiles. The public outcry coupled with previous NATO indecision on fielding plans for earlier nuclear weapons led the Soviets to believe that they need not make any serious concessions to the US in order to halt the fielding of INF systems.³³

The Soviet view did not consider NATO fears that the absence of nuclear capable missiles on the European continent effectively “delinked” the US from the possibility of a theater nuclear war.³⁴ These fears resulted from a mid-1960s US decision to remove IRBM from Europe based on the belief that advances in ICBM technology represented by Minuteman and improved SLBM allowed the US to utilize a portion of its ICBM force for European defense.³⁵ These withdrawals left NATO to wonder if the United States would use North American-based ICBMs to respond to a Soviet SS-20 strike on NATO territory and risk retaliation on American soil? A significant motivation for the 1983 fielding of Pershing II and GLCM was therefore to allay NATO “de-linking” concerns while introducing a new threat sufficient to drive the Soviet Union into meaningful negotiations on the reduction or elimination of both the US weapons and the SS-20s.

Faced again with the reality of US IRBMs on European soil and a realization that their strategy to derail this deployment had failed; the Soviets made a series of proposals to limit the missiles. Breakthrough steps were finally taken after the ascendancy of Gorbachev in 1985. In 1986 Soviet negotiators ended their effort to retain a number of SS-20s equal to the number of French and British IRBM and the INF treaty calling for the destruction of all SS-20, Pershing II and GLCM and permitting an intrusive, on-site verification process was signed in late 1987.³⁶

While US Pershing II and GLCM fielding may have been the catalyst that precipitated effective negotiations there is evidence that the true breakthrough was a result of a new leader, Gorbachev, looking at the situation in a new way. The fielding of SS-20 represented the first successful deployment of modern Soviet IRBM after almost 20 years of technological failures. While the deployment did provide some warfighting flexibility, its value as a counter to the US forward-based systems that had played such an important role in Soviet thinking throughout the 1950s and 1960s was minimal since those systems (Jupiter, Thor and B-47 bombers) had been long since withdrawn. Gorbachev realized that improvements to the Soviet ICBM force that had taken place during the Brezhnev era had given the USSR the same type of flexibility that ICBM development had given the US in the mid-1960s. He further understood by 1985 that Reagan's arms buildup showed no signs of slowing and that the prospect for another more extravagant chapter in the arms race was not in the Soviet Union's best interest. Soviet agreement to the INF treaty was acknowledgment that "a breathing spell in the East -West competition could be purchased at the lowest political cost by dramatic arms control steps."³⁷ It so happened that

concurrent with this realization Gorbachev had in his hands a weapon system which had outlived its strategic utility in the military sense but that could be sacrificed to help resuscitate Soviet political and economic influence.

Motivating Forces of Superpower Arms Control

The historical discussion of LTBT, SALT I, the ABM Treaty and the INF Treaty has illustrated some of the important issues that prompted the parties to enter into discussion and eventually come to closure in these documents. Both the United States and the Soviet Union consistently cited national security and reduction of the risk of nuclear war as their arms control goals. It's obvious however, that economics, the potential to gain or retain military advantage, and alliance politics all played major roles in establishing the conditions that drove the parties to the negotiating table. It's also clear that willingness to compromise, innovative negotiating techniques and disparate technological standing often determined the level of "success" in those talks.

The Role of Economics

The driving force of economics played a decisive role in both the start of the arms race and in the most productive steps to reduce nuclear weapons. Eisenhower's fiscal program placed emphasis on the procurement of nuclear weapons to replace force structure and divert dollars to domestic spending just as the Soviet Union was emerging as a nuclear power. The resultant expansion of the US nuclear arsenal established the mark on the wall that the Soviet Union spent the next 25 years trying to reach. For the Soviets, the incredible cost of research and development, manufacturing, and deployment of ever increasingly technical weaponry was a constant concern for the Soviet leadership. In both

SALT I and the INF Treaty the Soviets compromised on their “equal security” philosophy to secure agreement and relief from the prospect of additional rounds of expensive weapons competition with the US. Likewise, we now know that Soviet concerns that the US might manage some breakthrough in ABM technology that would necessitate the production of even more missiles was a factor in concluding that treaty.

Gain or Retain Military Advantage

By Soviet accounts, negotiating positions in SALT I and INF were initially designed with the intent of gaining advantage over the US.

The leadership in Moscow was not opposed to improving Soviet security through negotiations precisely because negotiations promised to slow the burden of the arms race and promised the attainment some advantage over the United States. The realization that this goal was to be achieved not by means of a nuclear arms buildup, but by the formulation of a clearly one-sided negotiating position and a tenacious adherence to it during negotiations.³⁸

Soviet objections to intrusive verification inspections were originally based on their desire to safeguard manufacturing and other technical data or to conceal force structure issues. Not surprisingly, even the Soviet delegations were directed to speak “as little as possible” about numbers or quality of Soviet arms due to the concern that their opponents were principally interested in using this information to gain advantage over the USSR.³⁹ This fundamental distrust made the US insistence that British and French nuclear weapons be excluded from SALT I and INF discussions all that much more suspicious. Obviously, from the Soviet standpoint, this was merely another attempt to gain such an advantage.

Alliance Politics

Nearly all of the documents discussed in this paper are bilateral agreements

between the United States and the Soviet Union. However, as a key member of NATO and since the INF treaty involved European deployed weapons, the United States was influenced by its alliance partners. This situation is best illustrated by US sensitivity to European concerns of strategic delinking which contributed to the decision to adopt the dual track strategy of INF deployment concurrent with negotiated reductions. Had European public opinion, shaped by the massive demonstrations, turned completely against the fielding of Pershing II and GLCM, there is a possibility that the deployments would never have taken place. Although the Soviet Union was also linked to its allies as a member of the Warsaw Pact, there is little information to support the idea that the nations of Eastern Europe ever had veto power over the positioning of nuclear weapons on their soil.

While economics, the intent to gain or retain advantages over one's opponent and alliance politics all played a role in bringing the superpowers to the bargaining table, a different set of conditions seem to have been critical to achieving "success" in arms control negotiations.

The Power of Compromise

Compromise is at the center of any effective negotiation process and was certainly a major component of superpower arms control negotiations. Despite the incredible level of distrust that existed between the two countries and the confrontational rhetoric that typified the cold war period, it seems that both sides appreciated the high stakes nature of the game they were playing and sought compromise when it was necessary to come to agreement.

The Soviets took a strong position on the inclusion of British and French nuclear weapons in the SALT I and INF negotiations but ultimately compromised on the issue in both agreements. In the case of SALT I, the Soviets were satisfied that the numerical superiority that they enjoyed in the final agreement compensated for the presence of these weapons.⁴⁰ In the INF discussions they rationalized their compromise by citing the relative insignificance of the combined British and French arsenals compared with the total numbers of deployed US and Soviet nuclear weapons.⁴¹ The US compromised on the freeze limits of the SALT I agreement tacitly agreeing to the Soviet philosophy of equal security even though the US position had been based on the concept of equal numbers of missiles. Similarly, both sides agreed to a compromise solution when the LTBT was deadlocked on the issue of on-site inspections. The middle ground was a limited versus a comprehensive ban which prohibited testing only in environments where compliance could be effectively monitored without the need for on-site verification.⁴²

Innovative Negotiating Positions

The most illustrative examples of innovative negotiation positions involve the US ABM treaty argument on the destabilizing nature of defensive missile systems and the NATO dual track approach to the INF discussions. The US logic justifying ABM limitations caught the Soviet delegation off guard. As previously discussed, their support for missile defense was based on historical perspective balanced with concern for the technical difficulties of creating viable ABM systems. The US position, tied to the destabilizing effects of such systems and the prospect that nationwide ABM defenses would perpetuate the upward spiral of weapons construction approached the issue from

the perspective of strategic stability. After taking the obligatory contradictory stand to the new proposal, the Soviets came to see that the novel US approach had merit and could be meshed with their goals.

I consider the US - NATO dual track approach to INF reductions innovative if for no other reason because of the signals that it must have sent to the Soviets regarding our commitment to the NATO alliance and our ability to expend tremendous fiscal resources with the full understanding that the sunk money of research and development and the actual cost of the deployed systems themselves were all on the bargaining table from the outset. How could a cash-strapped Soviet Union hope to compete with a country that could spend such money just to negotiate it away? In both the ABM and INF treaty examples the United States gained negotiating advantages as a result of imaginative and innovative bargaining tactics.

Disparate Technological Standing

The United States benefited at several points in the negotiation process from holding a technological advantage over the Soviet Union. The initial advantage was during the short lived but psychologically significant period of worldwide nuclear domination from 1945 to 1949. The false perception that the US had amassed a sizable nuclear arsenal with considerable delivery means during that period drove the Soviet arms buildup throughout the 1950s and 1960s and set the tone for arms control negotiations during this period. Additionally, US advantages in solid rocket fuel and MIRV warheads resulted in the rapid fielding of a very capable Minuteman missile force in the late 1960s which continued to influence Soviet negotiating policy throughout the SALT I and ABM talks.

The image of US technological advantage, and the cost of catching up, was a constant factor bearing on Soviet negotiating decisions⁴³.

The Contemporary Arms Control Scene

Having illustrated some of the key motivations of the parties during the period of superpower arms control between 1950 and 1991 and discussed successful negotiating positions and techniques its time to address their applicability to the contemporary arms control scene. To this effect I will present prospects for continued arms control success with Russia and a possible approach to the looming problem of China.

Russia

The fact that Russia no longer enjoys the worldwide political and military superpower status previously held by the Soviet Union does not alter the fact that it remains a country with a large nuclear arsenal - arguably the only country that has the power to destroy the United States. US - Soviet/Russian arms control has dominated the world stage since the late 1940s because the US and Soviet/Russian nuclear arsenals were and remain the most powerful in the world. More significant however is that Russia and the US enjoy an almost fifty year tradition of moderating nuclear confrontation through a continuing dialogue built around a predominately bilateral arms control process. The meaningful reductions now being carried out under the Strategic Arms Reduction Treaty (START) and promised in START II are the product of the relationship developed during SALT, ABM and INF negotiations.

The immediate task for the US is to continue to build with Russia on the foundation of arms control established with the Soviet Union. Its clear now in retrospect,

that the side that holds the best economic hand has a tremendous edge at the arms control bargaining table. The US may have unwittingly benefited from this fact in the early days of discussions with the Soviets and appears to have capitalized on it during the Reagan administration contributing to the ultimate collapse of the Soviet Union. The economic card must continue as a prime element of US - Russian arms control. Continued elimination of nuclear weapons in accordance with START will allow the Russians to draw down expensive force structure, reduce operations and maintenance costs, and allows for the diversion of industrial capability to the consumer sector. Commensurate US weapons reductions will continue to lower threat levels; continuing the momentum to bring weapons inventories to the absolute lowest level consistent with national security and economic interests.

The US should continue to expand its technological advantage in nuclear weapons as Russia deals with its difficult times. The tool that served to bring the Soviets to the table for fear that more efficient US technology would force them into expensive arms competition may have to be adjusted to fit new political realities. Supporting limited Russian modernization efforts as an inducement to further reduce the total numbers of weapons may be in order if Russia continues to move in the direction of democracy and free market economy. While this might seem a radical statement, a rational appraisal of the advantages that could accrue to the US from the cooperation and insights gained from such an operation might outweigh any down side; especially if the result of this innovative negotiating position was fewer weapons, in the hands of a military much more closely tied to the US. In any case, the financial assistance currently provided through the Nunn-

Lugar appropriations for the control and elimination of weapons and weapons material must continue.⁴⁴

Superpower arms dealings excluded the other declared nuclear powers principally because their weapons inventories were nowhere near as large nor were these countries locked into the same world-wide head-to-head competition as were the US and the Soviet Union. When US and Russian arsenals are drawn down to progressively lower levels however, the importance of these other forces will rise. Understanding how critical the bilateral nature of US - Soviet negotiations was to their eventual success it would seem appropriate that the US enter into a similar bilateral negotiation process with the next most significant nuclear power - China.

China

By many accounts the China will approach superpower status in the coming 10-15 years. If START negotiations with the Russians continue and existing US - Russian arsenals are drawn down to 3500 warheads apiece, China's growing inventory of 2300+ warheads will take on a whole new level of importance.⁴⁵ Certainly China's impressive economic growth, huge population base and wealth of natural resources alone make it a power to be contended with. Opening an arms control dialogue now may enable us to keep this potential superpower from adopting a more confrontational posture in the future.

China may not fear weapons competition with the United States from an economic perspective if it continues to take advantage of free market mechanisms to fund weapons development. Economic incentives may however, be used to US advantage. Whereas

the Soviet's centralized economy and inability to compete on the free market limited its susceptibility to market incentives, the Chinese seem to be capable and more than willing to engage the West in the open marketplace. The US needs to be looking at this angle on the use of a tried and true negotiation tool - economics to motivate China to enter meaningful dialogue on arms control issues.

China has moved slowly into the nuclear era since the detonation of its first weapon in 1969 and entry into service of its first ICBM in 1980.⁴⁶ Given its fifty years of weapons development the US should hold an appreciable technological edge over this opponent. The ability to turn this edge into an advantage at the negotiating table will be key. The United States' alliance connections could be brought to bear with some success in both the economic arena and on the issue of technology. US alliance partners - NATO, Japan, possibly even Russia, will provide many of the markets that the Chinese seem intent to participate in. These countries also control much of the technology that will be necessary to bring the full range of Chinese military and civilian capabilities up to 21st century standards. Judicious use of incentives and constraints in these arenas might be effective.

CONCLUSION

The four post-WW II nuclear arms control agreements discussed in this paper: the LTBT, SALT I, the ABM treaty and the INF treaty were successfully concluded because they satisfied at least the minimum requirements of the major signatory nations; the United States and the Soviet Union. Publicly, all of these negotiations were initiated to reduce

the threat of nuclear war and to achieve the national security interests of the negotiating parties. Apart from those lofty motivations however, there were always other, frequently less lofty, national agendas.

Intelligence, leader's personalities and internal or domestic politics all play roles in the motivation to enter into negotiations. My focus however, has been drawn to three specific motivations: economic relief, the desire to gain or retain advantage over one's adversary and pressures exerted by alliance partners. I have also identified three additional factors that seem, from my research, to have had a powerful effect on the outcome of the treaty talks: the power of compromise, innovative negotiating positions and the value of disparate technological standing. I believe that the evidence shows that these characteristics are so fundamental as to represent constants that must be considered in our approach to any future arms control issue.

These findings support the concept that an understanding of the influences that motivated the United States and the Soviet Union to enter into arms control negotiations during the cold war and an appreciation for factors that significantly effected the outcome of those talks can serve as a guide as the United States enters the single superpower era of arms control in the 21st century.

ENDNOTES

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⁶ IBID., 18, 27.

⁷ IBID., 110.

⁸ Dennis Menros, The Superpowers and Nuclear Arms Control (New York: Praeger, 1990), 137.

⁹ Michael Mandelbaum, ed., The Other Side of the Table (New York: Council on Foreign Relations Press, 1989), 22.

¹⁰ Menros, 2.

¹¹ Mandelbaum, 24.

¹² Menos, 137.

¹³ George, 110.

¹⁴ Mandelbaum, 2.

¹⁵ Aleksandr' G. Savel'yev and Nikolay N. Detinov, The Big Five (Westport, Connecticut: Praeger, 1995), 34.

¹⁶ US National Defense University, Strategic Assessment 1996 (Washington: National Defense University Press, 1996), 86.

¹⁷ Savel'yev, 9.

¹⁸ IBID., 10.

¹⁹ George, 84.

²⁰ IBID.

²¹ IBID.

²² US Arms Control and Disarmament Agency, Arms Control and Disarmament Agreements (Washington, DC: US Arms Control and Disarmament Agency, 1982), 137.

²³ Mandelbaum, 137.

²⁴ National Defense University, 89.

²⁵ Savel'yev, 22.

²⁶ IBID., 23.

²⁷ Mandelbaum, 137.

²⁸ On-Site Inspection Agency, On-Site Inspections Under the INF Treaty. A History of the On-Site Inspection Agency and Treaty Implementation, 1988-1991 (Washington, DC: US Government Printing Office, 1993), 8.

²⁹ IBID., 35.

³⁰ Mandelbaum, 107.

³¹ George, 43.

³² Mandelbaum, 108.

³³ IBID., 107.

³⁴ IBID., 97.

³⁵ Mandelbaum, 95.

³⁶ George, 101.

³⁷ IBID., 114.

³⁸ Savel'yev, 7.

³⁹ IBID., 13.

⁴⁰ IBID., 25.

⁴¹ IBID., 138.

⁴² Mandelbaum, 34.

⁴³ George, 22.

⁴⁴ United States Arms Control and Disarmament Agency, Threat Control Through Arms Control (Washington, DC: United States Arms Control and Disarmament Agency, 1995) 16.

⁴⁵ Yang Zheng, "China's Nuclear Arsenal," 16 March 1996, <<http://www.bme.med.ualberta.ca/~fwang/nuc-ch>>, 5 October 1996.

⁴⁶ IBID.

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